

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022938**Date Inspected:** 04-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in the Bay 10:

FCAW welding of weld joint BK014A-001-018 located on PCMK OBG bike path. Welder was identified as 057266. QC was identified as ZPMC CWI Li Jun (QC1). Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC CWI Sun Zi Wang (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-T-2231-ESAB as verbally identified by QCA1.

SMAW welding of temporary lifting lug to PCMK OBG bike path. Welder was identified as 057239. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2213 as verbally identified by QCA1.

Bay 11

This QA Inspector randomly observed the following work in progress in the Bay 11:

SMAW welding of weld joint 28TR1-002-003 located on PCMK OBG traveler rail. Welder was identified as

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044541. QC was identified as ZPMC CWI Xu Le Feng (QC2). Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Shao Hai Lang (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-P-2212 as verbally identified by QCA2.

SMAW welding of weld joint 28TR1-002-009 located on PCMK OBG traveler rail. Welder was identified as 046769. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-P-2212 as verbally identified by QCA2.

SMAW welding of weld joint 28TR1-002-016 located on PCMK OBG traveler rail. Welders were identified as 041713, 046704. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-P-2212 as verbally identified by QCA2.

FCAW welding of weld joints 3011TR1-001-011, 015 located on PCMK OBG traveler rail. Welder was identified as 040736. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-T-2132-ESAB as verbally identified by QCA2.

Also in Bay 11, in response to ZPMC NDT Inspection Notification Sheet #008736 for magnetic particle testing (MT) inspection of the following:

This QA Inspector performed random visual testing (VT) and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members were identified as follows:

OBG Section, 30TR1-001. The weld designations reviewed were: 017~020. No apparent indications were observed.

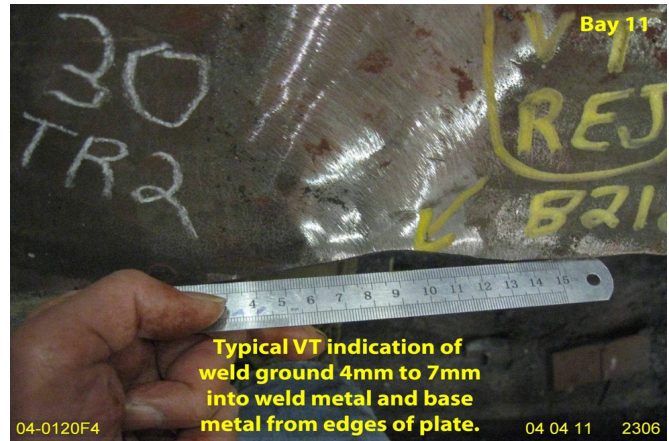
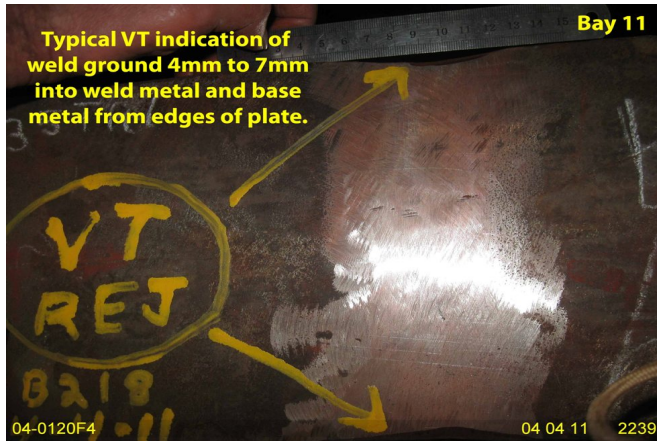
OBG Section, 36TR1-001. The weld designations reviewed were: 017~020. No apparent indications were observed.

This QA Inspector also performed random VT of OBG Section, 30TR2-001-017~020 and OBG Section, 35TR1-001-017~020 listed on ZPMC NDT Inspection Notification Sheet #008736. However, the butt welds appeared to be incomplete as all 8 welds had been ground 4mm to 7mm inwards from the edges of the plates into the weld metal and base metal. This QA Inspector rejected the VT based on the above merits and the MT was not performed. See photos below of 2 of the 8 welds rejected.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Riley, Ken

QA Reviewer